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Sontana Department of Health and Environmental Sciences

Montans Department of Health and Environmental Sciences MONTHLY ACTIVITIES REPORT OF THE AIR QUALITY BUREAU

May, 1977

STATE DOCUMENTS

1. Highlights

Continued work on Kalispell TSP project.

Proposed study efforts for HB 250 health study (MAPS).

Updated Emission Inventory.

2. Ambient Air Quality Network

Standards Exceeded:

SO -- East Station, Fast Helena, 5 excur. MT 1-hr std.
Saddle Mountain, 1 excur. MT 1-hr std.
Microwave Tower, 3 excur. MT 1-hr std.
Mill Creek, Anaconda area, 6 excur. MT 1-hr std.
C-Hill, 12 excur. MT 1-hr, 1 excur. MT 24-hr., 1 excur. Fed. 3-hr. std.
Hiway Jot., 14 excur. MT 1-hr std.
Post Office, 17 excur. MT 1-hr std., 1 excur. Fed. 24-hr. std.

Lame Deer - 240 micrograms/m³ TSP*
Kalispell - 155 micrograms/m³ TSP*

*Total Suspended Particulate

Air Stagnation Advisories:

None issued during May.

Laboratory Status:

Total determinations for the month: 171
Total samples for the month: 171

Developments:

Routine maintenance and calibration of equipment done in state.

Spent 4 days locating soil and vegetation sampling sites, collecting soil samples.

3. Permits and Tax Credits

Construction Permits Applied for:

James Zion, Dawson Co., portable gravel crusher Robert Tindall, Choteau Co., hot mix dryer drum mixer Anaconda Co., Anaconda, baghouse dust collector Anaconda Co., Anaconda, new stack - expansion of acid plant Gus Albert, Custer Co., portable gravel crushing plant MMSE SEP 14'77

Monthly Report of Activities - Page 2 May, 1977

3. Permits and Tax Credits - Cont.

Mortenson Construction, Teton Co., gravel crushing plant Baltrusch Const. Co., Gallatin Co., asphalt hot mix plant W. R. Grace Co., Libby, air pollution control equipment James Zion, Richland Co., portable gravel crushing plant

Construction Permits Approved:

Powder River Nursing Home, Broadus, Kewanee boiler Thunderbird Resources, Westco Refinery, hydrotesting and reforming process unit

James Zion, Dawson Co., portable gravel crusher Robert Tindall, Choteau Co., hot mix dryer drum mixer Anaconde Co., Anaconda, baghouse dust collector Gus Albert, Custer Co., portable gravel crushing plant Mortenson Construction, Teton Co., gravel crushing plant Baltrusch Const. Co., Gallatin Co., asphalt hot mix plant James Zion, Richland Co., portable gravel grushing plant

Tax Credits:

None Received in May.

4. Variance Status

Current Variances:

Anaconda Aluminum Co., Columbia Falls, F and particulate, expires 6/30/77 The Anaconda Co., Anaconda, SO,, expires 6/30/77 ASARCO, Inc., East Helena, SO,, expires 6/30/77

New or Renewed:

Anaconda's application for a variance from the visibility rule for the smelter has been scheduled for the June Board meeting.

Anaconda's application for a renewal of the variance from the particulate emission rule for the smelter has been scheduled for the June meeting. The need for this extension has disappeared since the last reverberatory furnace was shut down about March 7.

Anaconda's application for a variance from the particulate emission rule for the foundry at Anaconda has been scheduled for the June Board meeting.



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Variances - New or Renewed, Cont.

Anaconda Company's SO₂ variance renewal request has been scheduled for July Board meeting.

ASARCO, Inc., at East HElena, has applied for one-year variance renewal for lead plant.

Anaconda Aluminum has applied for renewal on F and particulate variance.

5. Enforcement Action

Citations:

Hoerner-Waldorf, Missoula, TRS-#3 recovery boiler, S1400, 6 violations (Permits, Construction and Operation of Equipment)

Wickes Forest Industries, Townsend, (Visible Emissions, Wood Waste Burners) S14030

Notices of Violation:

None

Order for Corrective Action:

Wickes Forest Industries, Townsend, Tepee burner modification, final date August 1, 1977

Court Actions:

Department filed suit in Lake, Sanders, Lincoln and Flathead Counties to prohibit them from allowing open burning without a permit. District Judge ruled in Department's favor and ordered Lincoln County to pay court costs and attorneys fees.

6. Tepee Burner and Open Burning

The proposed changes in the open burning rule will be heard at the June 27 Board meeting.

Tepee Burner Status:

No. at Start 39 New starts 0 Shutdowns 0 No. at end 39

Open Burning Permits:

Kalispell Office	- 310	Sanders County - 127
Cascade County	- 18	Yellowstone County - 54
Lake County	- 32	Rest of State - 1228
Missoula County	- 12	Total Permits 1781



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7. Source Tests Performed

Agency Source Tests:

None

Non-Agency Source Tests:

Y.S.§ B Laboratories of Billings tested Colstrip Unit #1 for NSPS compliance,

Hoernor-Waldorf, Missoula, 19 particulate tests on recovery boilers, lime kilns, slashers, smelt tanks and hogged fuel boilers - all in compliance.

Observed source tests at Montana Sulfur & Chemical Company, tail gas incincerator.

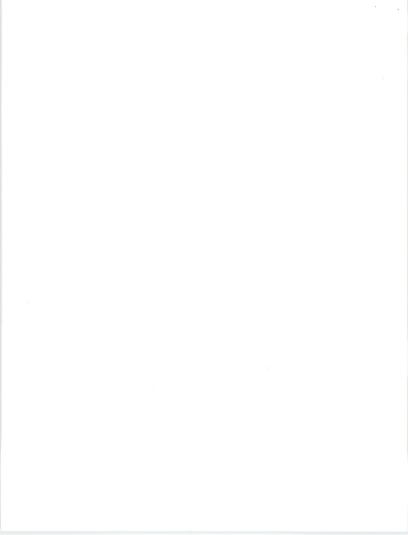
8. Field Investigations

Anaconda Smelter, Anaconda SO2 problems Silver City, topee burner, inspection - no violation Tepee burners, Livingston, no violations Colstrip Unit #1, opacity observation, follow-up Silver Bow County, hot mix plant, observation Wickes Forest Industries, Townsend, tepee burners, Citation, Order for Corrective Action, inspection and opacity observation Yellowstone Pine, Belgrade, tepee burner Cokedale Road, Livingston, fugitive dust Joslyn Avenue, Helena, fugitive dust East Helena, odor and throat irritation Cenex Seed Company, Miles City, inspection Ekalaka, Hospital, Ekalaka, incincerator Montana Sulfur and Chemical Company Cyprus Industrial Minerals, Three Forks, inspection and opacity observation St. Regis Lumber, Libby, boiler 7 & 9, documentation Diehl Lumber, Plains, boiler violation, tepee burner okay, conference Right of way burning with BNRR, Columbia Falls to Summit American Timber, Olney, tepee, (40%) violation - corrected Louisiana Pacific Lumber, Columbia Falls, tepee burner, (50%) violation. corrected Plum Creek Fiberboard, Columbia Falls, conference regarding cyclone chip bin

Flum treek Fiberboard, Columbia Falls, conference regarding cyclone chip bin Superior Building, Columbia Falls, tepee burner 100% corrected Plum Creek #3, Columbia Falls, dryer emission, conference American Asphalt, Kalispell, documentation, no violation

9. Complaints

Great Western, Billings, odors from ponds, investigation Mobile City Trailer Park, Helena, fugitive dust, investigation Joslyn Avenue, Helena, fugitive dust, investigation and follow-up East Helena, odor and throat irritation, investigation Park City, open burning of buildings and tarpaper, written reprimand Riverside Sawmill, Roundup, burning trade waste, follow-up



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C. Complaints - Cont.

Flathead County Courthouse Annex Welfare Office, irritants to workers Plum Creek, emissions Coram, road dust Cokedale Road, Livingston, excessive dust, investigating ASARCO, East Smelter, emissions, investigating Scratch Gravel Dump, Helena, open burning, investigating

10. Data Processing Services

Ambient Data Summary:

Monthly report of April air quality data attached

Emissions Inventory Status:

Updates were received and processed.

Submitted undated inventory forms for Great Western Sugar, Corette Plant and Lewis & Clark Plant.

Prevention of Significant Deterioration:

Wrote second letter to person in Noxon regarding further inquiry into regulations.

Discussed Northern Cheyenne redesignation with Wyoming Governor's Office.

Modeling:

Significant portion of time was spent in diffusion modeling analysis of Billings AQMA ${\rm SO}_2.$

Public hearing was attended in Denver on draft guideline for diffusion modeling sponsored by $\ensuremath{\mathtt{EPA}}.$

11, Environmental Impact Statements

Agency Impact Determinations:

None

Other Agency EIS's Reviewed:

None

12. Status of Studies, Contracts and Reports

Poplar River Study - lightning caused some problems with instruments, but all are operating now.

Kalispell - instructed operators on use of pilot balloon timer; Cabin Creek site viewed.

Pacific Environmental Services is working on report on Arizona smelter inspection trip and recommendations for improvements at Anaconda.



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12. Status of Studies, Cont.

State's modeling for Billings SO_2 air quality maintenance plan was discussed in Denver; additional information, corrections to model and use of different dispersion equations were discussed.

ASARCO, Troy Project, background study, secured power for two stations.

Cascade County program draft audit report prepared.

Hoerner-Waldorf test observation report 90% complete.

Billings CO, TSP, SO2 work continuing.

Missoula TSP - work continuing.

S.E. Coal area - work going well.

Butte--Anaconda Company contacted for the first time.

Health Study Phase I - $\mbox{\sc EPA}$ is reviewing data submitted by Bureau of Records and Statistics.

Health Study, Phase II - awaiting EPA's review of data from Phase I.

MAPS I - working on study design.

Colstrip - Montena Power Company monitoring study--plotting monitor locations and looking into new site locations and total network design.

13. Schools and Training

Smoke Management Workshop, Missoula, May 23-25, 1977

Instructed Great Falls air pollution agency on how to correctly perform hi-vol calibration and data reduction

Instructed Decker Coal Company on methods of operation, calibration, and data processing of hi-vol data

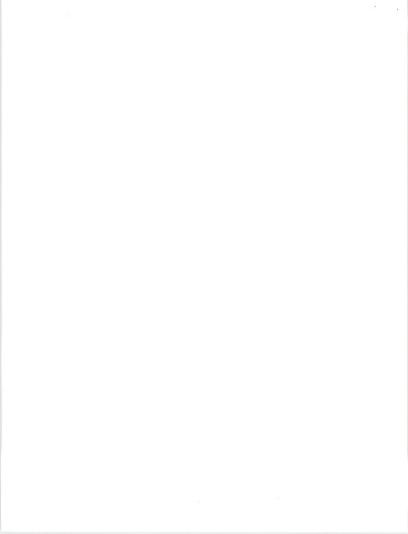
14. Public Hearings and Meetings

Public Hearings:

Board of Health met to allow Montana Power Company equal time to refute allegations put forth by Northern Plains Resource Council. Board will make final decision on action after receiving Department's recommendations June 26.

Meetings Attended:

Air Quality Advisory Council, Helena, open burning regulations Helena, health study SCobey SCS representatives and Board, Poplar River Study DNR and staff, Circle West Study



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14. Public Heatings and Meetings, Cont.

DNR and ERT representatives, Circle West study EPA and staff, Billings AOMA SO2 Met with EPA. Billings industries and staff, Billings AOMA Stillwater River Project, Bill Marlatt, to discuss analysis of calcium formate papers Cascade County, program audit W. R. Grace, Libby, in Helena, regarding permit application Roland Feeds, regarding permit application Met with Oleda, FHWA, regarding SIP Highway Impact Evaluation Group, Helena AOMA Public Information Program, Billings S.E. Coal Area, citizen participation, Northern Plains Resource Council, Billings Montana Assocation of Planner to develop and maintain contacts with land-use planners Three Forks, mayor, fugitive dust Stauffer Chemical Company, air sampling problems Rockwell, future audits of Helena and Anaconda-Butte area

Intra-Staff Meetings:

Health Study, Helena SO₂ AQMA, Billings, in Helena and Denver Cascade County program audit, Helena NSPS, in Helena ASPS, in Helena S.E. Coal Area AQMA regarding violations at Colstrip, research needs

Northern Light & Power Co., Sandpoint, Idaho, completed plans for power line construction for ASARCO air quality sites

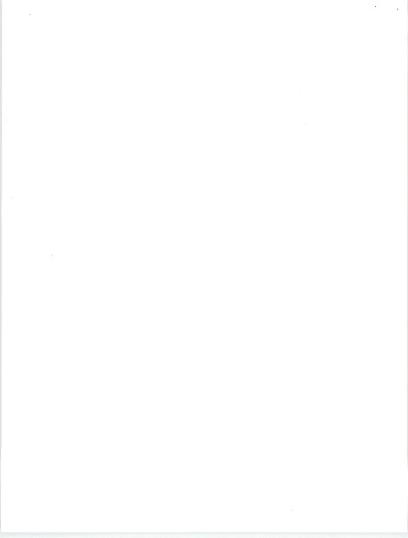
15. Public Information Requests

Rules - 14 Clean Air Act - none General Information - 9

16. None

17. Other

Quarterly report of air quality data sent to EPA



MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

April 1977

Pollutant: Total Suspended Particulate

Units: mq/m³

AREA ARITHMETIC AVER. Year-to No. of Commonts AOCR Site Location -Date Manth Von Date 122 208 140 Norton Resident Big Horn Co. Warren Ranch 46 46 146 13.4 Δ Big Horn Co. Lockwood School ۵ 91 109 141 41.9 Billings 83 83 154 34.1 Rillings City Hall Billings 97 151 151 -65.5 4 50.1 4 Grand Ave. Sch. 101 101 135 Billings Burnstead Orive 688 688 1117 306.8 4 4 excur. Fed. Billings Laurel Jr. High Prim. Std. 57 57 108 32.1 4 Laurel 141 Hospital Roof 95 129 129 39.7 4 Great Falls 2 excur. Fed. Sec. Std. Fire Sta. #1 177 869 969 97.1 Δ Great Falls 142 Sil. Bow Gen. Butte Atkins Res. Butte Richer Res. Butte Hiway Jct. 97 121 250 47.0 4

117

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35.2

Pollu	tant: Total Susp	ended Par	ticulate		Inits: M		
	AREA		READING		ARITHME	TIC AVER	
AQCR	Site Location	Current Month	Year-to -Date	Year	Year-to -Date	No. of Mons. of Data	Comments
142	Microwave	45	52	66	20.6	4	
	Jefferson Co. 212 Pacific Ave. Lewis & Clark	133	149	187	73.3	4	
	Tierney Res.			*			
	Silver Bow Co. Littlefield Hill			*			
143	Miles City Glendive	51	102	102	28.5	4	
	Dawson County Fort Peck	75	91	91	37.6	4	
1	McCone Co. Broadus	29	51	62	15.B	4	
	Powder Riv. Co BN Site	71	93	104	37.7	4	
	Colstrip McRae Site Colstrip	102	102	102	17.9	4	
144	High School Col. Falls	212	212	294	81.2	4	3 excur. Fed.Sec 1 excur. MT. Pri
	Courthouse	261	295	342	113.6	4	3 excur.Fed.Sec. 1 excur.Fed.Prim
1	Missoula J. B. Field	111	140	214	56.9	4	
	Missoula Co. Frenchtown	255	255	255	53.5	4	1 excur.Fed.Sec. 1 excur.MT Prim.
	Missoula Co. Kalispell	177	177	177	88.6	4	2 excur.Fed.Sec.

McKinley Res. Granite Co. *Fouriment down - no data

57 90

Anaconda

Missoula Co. *Equipment down - no data

Flathead Co.

122 122 122 122.0 1

	AREA	HIGH R	HIGH READING			ARITHMETIC AVER.			AREA	HIGH READING			
AQCR	Site Location	Current Month	Year- to-Date	Running Year.		No. of Mons. of Data	Comments	AQCR	Site Location	Current Month	Year- to-Date	Ru	
140	Carbon Monoxide 11th & S. 27th Billings			**				143	Nitrogen Dioxide BN Site Colstrip				
144	27th & Montana Billings Malfunction Jct. Missoula	7.20 17.4	13.50	27.50 17.5	2.909 4.940	3		143	Oxides of Nitrog BN Site Colstrip	en_			
140	Hydrocarbons 27th & Montana Billings	6.90	6.90	10.20	2.156	4		140	Ozone 27th & Montana Billings	0.06	0.06	0.	
143	BN Site Colstrip	1.55	2.70	3.50	1.231	4		143				r	
143	Meth. Hydrocarbo BN Site Colstrip	1.55	2.20	2.20	1.240	4		140	Billings	0.20	0.20	0.	
143	Non-Meth. Hydroc BN Site	rbons 0.14	0.15	2.00	0.022	4			Laurel Farm Billings Laurel Water Pli	0.32	0.61	0.	
	Colstrip Nitric Oxide							142	Billings East Stack E. Helena	0.24	0.25	0.	
143	BN Site Colstrip		 	****	 	·			Hicrowave E. Helena	0.51	0.51	0	
140	Nitrogen Dioxide 27th & Montana Billings	0.00	0.08	0.11	0.012	4			Saddle Mountain E. Helena C-Hill Anaconda	1.77	1.77	2	

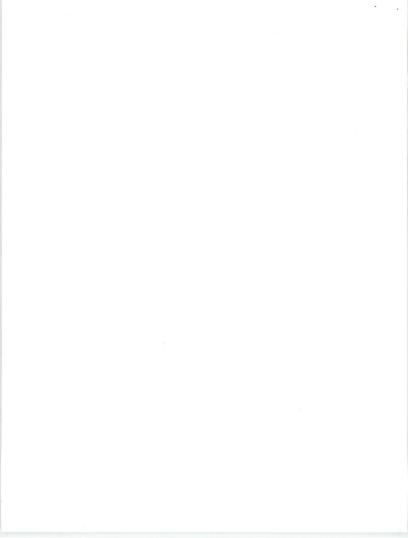
Current Year-Year- No. of to-Date Data Consents Site Location AOCE Month to-Date Year Nitrogen Dioxid 143 Colstrip Oxides of Nitrogen 143 Colstrip Ozone 27th & Montana 140 0.06 0.10 0.017 4 Billings 143 BN Site Colstrip Sulfur Oloxide 4 140 0.20 0.20 0.20 0.002 Billings Laurel Farm Billings 7 excur.MT 1-hr. 1 excur.MT 24-hr 0.80 0.070 4 0.32 0.61 Laurel Water Billings 0.25 0.44 0.012 142 East Stack E. Helena Microwave 0.24 5 excur. MT 0.51 1.08 Δ 0.51 0.011 1-hr. standard E. Helena 0.48 0.56 0.013 4 excur. MT Saddle Mountain 0.37 1-hr. standard E. Helena 1.77 1.77 2.54 0.009 ۵ 1 excur.Fed.Sec 2 excur.MT 24-h C-H111

*Equipment down - no data **Site no longer in operation ***Oata not available at time of report

**Site no longer in operation
***Oata not available at time of report

Units: parts per million

ARITHMETIC AVER



MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA April 1977 Page 2 of 3

P	llutant: Miscellan	eous Cont	inuous Oa	ita !	Jnits: p	arts per	million	Polls	stant: Miscellane				Units		
T	AREA	HIGH	READING		ARITHMET	IC AVER.			AREA	HIGH	READING		1	TIC AVER.	
AQ	CR Site Location	Current Nonth	Year-to	Running	Year-to-	No. of Mons. of	Communits	NÇCR	Site Location	Current Month	-Date	Year Year	-Date	No. of Mons. of Data	Comments
	Suffre Dioxide Hivey Junction Anaconda Hincoma Hincoma Hincoma Hincoma Hincoma Post Office Anaconda Hincoma	0.6S 0.40 0.90 0.22 0.10	1.46 0.88 0.90 0.40 0.10	1.58 1.36 1.02 0.40 0.10	0.031 0.018 0.008 0.006 0.003	4 4 4 4	14 excur. MT 1-hr. standard 1-hr. standard 1-hr. standard 1 excur.Fed.Sec. 2 excur.MT 24-hr	143	FLUORIDE PAPERS NUTIFIEDURE POWER! County N Ac Hey Power! County N Ac Hey Power! County N Ac Hey Sill Bow County EST State Sill Bow County Colstrip HeRae Site Colstrip HeRae Site Colstrip HeRae Site Gallenter Glac. Natl. Part Glac. Part Ri Glac. Part Ri Glac. Natl. Part Glac. Part Ri Glac. Natl. Part Glac. Part Ri Glac. Natl. Part FLUORIDE PARTS FLUORIDE PARTS FLUORIDE PARTS No Herae No		cm./30 d	*** *** *** *** *** *** ***			
L		L	<u></u>				1	L	Powell County Data not available	e at time	of repo	rt			

Pollutant: Miscellaneous Indicators Units								Pollutant, Miscellaneous Indicators Units:							
	AREA HIGH RE		HIGH READING ARITHMETIC AVER.					AREA		HIGH READING			ARITHMETIC AVER		
AQCR	Site Location	Current Month	Year- to-Date	Running Year	Year- to-Date	No. of Mons. of Data	Comments	AQCE	Site Location	Current Month	Year- to-Date	Running Year	Year- to-Date	No. of Mons. of Data	Comments
144	FLURCIOE PLATES Kamaay Mest: Silver Bow Co. ESS Stauffers Silver Bow Co. ESS Stauffers Colstrip McRae Site McR	9.62 23.23 7.48	48.15 23.75 8.50	***- ***- ***- ***- 8.820 0.720 ***- 48.15 27.02 8.50	3.555 0.492 25.64 19.04 7.41	4 4 4		141	Great Falls Phillips Ref. NI Great Falls Phillips Ref. E Great Falls Microwave E. Helena Hiway Junction Anaconda C-Hill Anaconda	0.128	0.607 0.629 0.57S 0.650	0.607 0.629 0.\$7\$ 0.650	0.408 0.447 0.315 0.375	4 4 4	



MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA April 1977 Page 3 of 3

Units: parts per million Pollutant: Miscellaneous Bubbler Data HIGH READING ARITHMETIC AVER. Current Year-to Running Year-to-No. of Nonth -Date Year Date Nata AQCR Site Location Comments Sulfur Oloxide
Lockwood School
Billings
JS BI. NE Coop
Billings
Lockwood School
Billings
JS BI. NE Coop
Billings
Oaniels Co.
Ft. Peck
McCone Co.
Lamb Deer
Rosebud Co.
BN Size 0.0611 0.0611 0.2012 4 0.0161 0.0 4 0.0 0.0 0.0 0.0 4 0.0 0.0 0.0 0.0 4 0.0 0.0 0.0 Rosebud C BN Site Colstrip McRae Site Colstrip Nitrogen Dioxide
Scobey
Oaniels Co.
Ft. Peck
McCone Co. 0.005 0.008 0.006 4 0.0 0.0 0.003 0.0 0.0 Lame Deer Rosebud Co. BN Site Colstrip 0.0070 0.0110 0.0013 4 0.0 McRae Site Colstrip

11u	tant:	1	READING		Units:	TIC AVER	
	AREA						
CR	Site Location	Current Month	orrent Year-to Kunning onth -Date Year		-Date	No. of Nons. of Data	Comments
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				1			
				1			

***Data not available at time of report

Pollu	stantı				mits			P011	itant:				Units:		
	AREA	HIGH B	HIGH READING ARITHMETIC AVER.						AREA				ARITHMETIC AVER		
AQCR		The second secon			Comments	AQCR	AQCR Site Location	Current Year- Runnit Month to-Date Year			Year- No. of Control to-Date Data		Comments		
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